

## REMARKS

Reconsideration and allowance in view of the following remarks are respectfully requested. Specifically, favorable consideration of pending Claims 1-76 is respectfully requested.

### THE REJECTION UNDER 35 U.S.C. §102(e)

Claims 1-76 were rejected under 35 U.S.C. §102(e) as being anticipated by Shum, et al. (U.S. Patent 6,476,805; hereafter “Shum”). The Applicant respectfully traverses this rejection, and further requests that this rejection be reconsidered and withdrawn.

In order for a claim to be anticipated by a reference, MPEP §2131 clearly states that the reference must teach every element of the claim and also be arranged as required by the rejected claim. The importance of such requirements is emphasized as the criteria are set out in the opening discussion of the standards for an anticipation rejection in MPEP §2131:

“The identical invention must be shown in as complete detail as is contained in the...claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

However, Shum does not meet the requirements for anticipating Claims 1-76, contrary to the assertion set forth in the outstanding Office Action.

For instance, **Claim 1** recites a method for compressing concentric mosaic image data having a plurality of frames that comprises:

- selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames;
- independently encoding each of the anchor frames; and
- encoding a prediction residue for each of the predicted frames, the prediction residue for each of the predicted frames being determined by referring each of the predicted frames to at least one of the anchor frames.

On the other hand, Shum fails to teach or suggest “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames.” Rather, the cited portion of Shum (col. 12, lines 30-44) refers to a prediction light field image and reference light field images, but not in the context of the anchor frames and predicted frames of Claim 1.

More particularly, Shum describes reducing inter-image spatial redundancy by estimating spatial displacement of the prediction light field image from one or more reference light field images (Shum, col. 12, lines 35-37). There is no mention, however, of selectively dividing image frames into the aforementioned prediction light field image and reference light field images. That is, Shum does not teach “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames,” as recited in Claim 1.

Shum does describe “after a first level of filtering, the compression unit performs additional frequency decomposition on the LL subband of a light field image using cascaded analysis filter banks,” (Shum, col. 17, lines 43-46). Still,

the additional frequency decomposition described by Shum also fails to teach or suggest “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames,” as recited in Claim 1.

Even assuming, *arguendo*, that Shum does describe dividing image frames into the prediction light field image and reference light field images, Shum also fails to teach “independently encoding each of the anchor frames” as recited in Claim 1. Specifically, the rejection cites Shum, col. 18, lines 40-63, wherein a wavelet block is coded by a compression unit. However, there is no indication that the wavelet blocks formed by the compression unit (Shum, col. 18, lines 6 and 7) are the same “reference light field images” described in col. 12 of Shum’s description. Thus, Shum does not “teach every element of the claim ...arranged as required by the rejected claim” as required by MPEP §2131.

The rejection further cites Shum, col. 15, lines 15-26 and col. 40, lines 35-60 as anticipating “encoding a prediction residue for each of the predicted frames, the prediction residue for each of the predicted frames being determined by referring each of the predicted frames to at least one of the anchor frames,” as also recited in Claim 1. However, the cited portion of Shum, col. 15 refers to a compression unit having at least one analysis filter bank with a highpass filter and a lowpass filter that produce two subbands with equal numbers of samples. Thus, the reference lacks any teaching of predicted frames, predicted frame residue, the predicted frame residue being encoded, and the predicted frame residue being determined by referring to at least one anchor frame, as in Claim 1.

Therefore, for at least the reasons set forth above it is respectfully submitted that Shum fails to anticipate Claim 1, as well as Claims 2-22, which depend either directly or indirectly from Claim 1.

The computer-readable medium of independent **Claim 23** has computer-executable instructions that correspond to the method of Claim 1. Therefore, for at least the reasons set forth above, the Applicant respectfully submits that Claim 23, as well as corresponding dependent **Claims 24-39** are distinguishable over Shum.

The apparatus of **Claim 40** recites:

- memory suitable for storing concentric mosaic image data having a plurality of frames; and
- logic operatively coupled to the memory and configured to selectively divide the plurality of frames into a plurality of anchor frames and a plurality of predicted frames, independently encode each of the anchor frames, and encode a prediction residue for each of the predicted frames, the prediction residue for each of the predicted frames being determined by referring each of the predicted frames to at least one of the anchor frames.

It is respectfully submitted that Shum does not teach or suggest the logic recited in Claim 40.

Specifically, Shum fails to teach or suggest “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames.” Rather, the cited portion of Shum (col. 12, lines 30-44) refers to a prediction light field image and reference light field images, but not in the

context of the anchor frames and predicted frames of Claim 40. Although Shum does describe reducing inter-image spatial redundancy by estimating spatial displacement of the prediction light field image from one or more reference light field images (Shum, col. 12, lines 35-37), there is no mention, however, of actually selectively dividing image frames into the aforementioned prediction light field image and reference light field images. Thus, Shum does not teach “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames,” as recited in Claim 40.

Shum further describes “after a first level of filtering, the compression unit performs additional frequency decomposition on the LL subband of a light field image using cascaded analysis filter banks,” (Shum, col. 17, lines 43-46). Still, the additional frequency decomposition described by Shum also fails to teach or suggest “selectively dividing the plurality of frames into a plurality of anchor frames and a plurality of predicted frames,” as recited in Claim 40.

*Arguendo*, even if Shum does describe dividing image frames into the prediction light field image and reference light field images, Shum also fails to teach “independently encoding each of the anchor frames” as recited in Claim 40. Specifically, the rejection highlights Shum, col. 18, lines 40-63, wherein a wavelet block is coded by a compression unit. However, there is no indication that the wavelet blocks formed by the compression unit (Shum, col. 18, lines 6 and 7) are the same “reference light field images” described in col. 12 of Shum’s description. Thus, Shum does not “teach every element of the claim and also be arranged as required by the rejected claim” as required by MPEP §2131.

The rejection further cites Shum, col. 15, lines 15-26 and col. 40, lines 35-60 as anticipating “encoding a prediction residue for each of the predicted frames, the prediction residue for each of the predicted frames being determined by referring each of the predicted frames to at least one of the anchor frames,” as performed by the logic of Claim 40. However, the cited portion of Shum, col. 15 refers to a compression unit having at least one analysis filter bank with a highpass filter and a lowpass filter that produce two subbands with equal numbers of samples. Thus, the reference lacks any teaching of predicted frames, predicted frame residue, the predicted frame residue being encoded, and the predicted frame residue being determined by referring to at least one anchor frame, as done by the logic of Claim 40.

Therefore, for at least the reasons set forth above it is respectfully submitted that Shum fails to anticipate Claim 40, as well as Claims **41-56**, which depend either directly or indirectly from Claim 40.

**Claim 57** recites a method for decompressing a bitstream having encoded anchor frame data, encoded predicted frame data, and indexing data associated with compressed concentric mosaic image data having a plurality of frames, the method comprising:

- accessing the index data to identify:
- a unique location for each encoded anchor frame within the encoded anchor frame data and from each encoded anchor frame each encoded anchor frame macroblock group (MBG) therein, and

- a unique location for each encoded predicted frame within the encoded predicted frame data and from each encoded predicted frame each encoded predicted frame macroblock group (MBG) therein; and
- for each new view to be rendered:
  - determining which encoded anchor frame MBGs and encoded predicted frame MBGs are to be used in rendering the new view;
  - selectively decoding the encoded anchor frame MBG to be used in rendering the new view; and
  - selectively decoding the predicted frame MBG using all referenced decoded anchor frame MBGs for the predicted frame MBG.

The Applicant submits that Shum does not anticipate the features set forth above.

In particular, Shum fails to teach or suggest encoded anchor frame data and encoded predicated frame date, as in Claim 57. Rather, col. 12 of Shum (as cited in the rejection) refers to reducing inter-image spatial redundancy by estimating spatial displacement of the prediction light field image from one or more reference light field images (Shum, col. 12, lines 35-37). Further, although Shum describes compressing a presentation of the prediction light field images (Shum, col. 12, line 38), there is no mention, however, of encoded anchor frame data, as in Claim 57.

Thus, in view of the lack of teaching by Shum of, at least, encoded anchor frame data, it is a moot point to even consider whether Shum describes: accessing index data to identify a unique location for the encoded anchor frame data or a MBG therefrom; determining encoded anchor frame MGB to be used in

rendering a new view; or selectively decode an encoded anchor frame MBG to render the new view, as further recited in Claim 57.

Therefore, for at least the reasons set forth above it is respectfully submitted that Shum fails to anticipate Claim 1, as well as Claims **58-67**, which depend either directly or indirectly from Claim 57.

The apparatus of independent **Claim 68** has logic that performs operations corresponding to the method of Claim 57. Therefore, for at least the reasons set forth above, the Applicant respectfully submits that Claim 68, as well as corresponding dependent **Claims 69-76** are distinguishable over Shum.

For at least the reasons set forth above, it is respectfully submitted that Shum does not teach the invention of Claims 1-76, and therefore the rejection under 35 U.S.C. §102(e) should be withdrawn.



## CONCLUSION

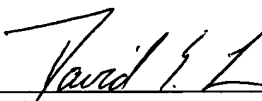
The remaining references of record have been considered. It is respectfully submitted that they do not compensate for the deficiencies of any of the reference utilized in rejecting pending claims 1-76.

All objections and rejections having been addressed, it is respectfully submitted that the present application is now in condition for allowance. Early and forthright issuance of a Notice of Allowability is respectfully requested.

Respectfully Submitted,

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Dated: June 14, 2004

  
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